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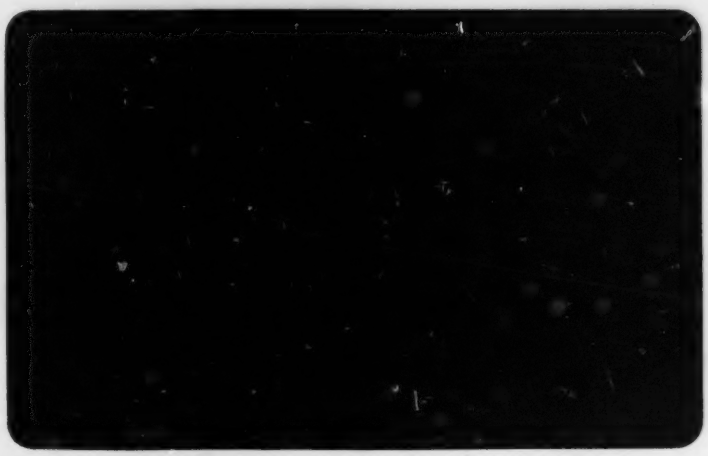

GROWING INTENSIVE

LIVESTOCK OPERATIONS

IN

NORTHERN ALBERTA

June, 2001

GROWING INTENSIVE LIVESTOCK OPERATIONS IN NORTHERN ALBERTA

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JUNE 2001

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GROWING INTENSIVE LIVESTOCK IN NORTHERN ALBERTA

Executive Summary

The NADC facilitates economic development in northern Alberta by promoting opportunities and addressing barriers to the north's development. The NADC has commissioned the consultant to review the opportunities for intensive livestock operations in Northern Alberta. The report outlines the opportunities, barriers and factors affecting and influencing the development of intensive livestock in northern Alberta. In addition the report makes recommendations aimed at growing intensive livestock operations in northern Alberta. It outlines a series of actions that will be effective and viable in growing intensive livestock in the region. It should provide a blueprint for action to enhance the opportunities for intensive livestock operations.

The intensive livestock industry is a growing business in Alberta. Some general observations are in order regarding the livestock industry in northern Alberta.

- Overall, the livestock industry in northern Alberta has maintained it's share of the Alberta market at approximately 10% of the total number of animals;
- There is a small but significant intensive livestock industry in northern Alberta;
- The predominate livestock in terms of numbers in northern Alberta is cattle;
- The number of cattle in northern Alberta has more than doubled in the past 25 years;
- The number of cattle in northern Alberta as a percentage of the overall Alberta herd has increased from 8% to 11.6% in the past 25 years;
- Hog production in terms of absolute numbers and as a percentage of the Alberta total has declined since 1971 although more recently there has been an increase in production;
- Bison numbers are also increasing, and are nearly ½ of the provincial totals;
- Other specialty livestock are growing and are important but not significant;
- The growth in chickens and dairy is constrained by the supply management system, particularly the chicken industry;
- There has been growth in those parts of the livestock industry that are not governed by government regulated boards.

Northern Alberta has numerous opportunities for growth and few barriers to thwart an expanding livestock industry. In examining the barriers for intensive livestock, some of the more traditional concerns or reasons against the expansion of the industry are not in

fact true barriers. Indeed, there has been expansion in the intensive livestock industry in northern Alberta. However, the expansion has been smaller and more quietly than the large expansions that have generated significant media coverage in the south. Some of the major attributes of the north include:

- Lots of inexpensive land;
- A population density that is well below provincial averages;
- Excess forage production;
- Good access and availability of important infrastructure such as power, gas and paved roads;
- An abundance of water but much of the water is contained within river systems which will require assistance to access;
- Climate should not be considered a major barrier as many of the climatic conditions in northern Alberta are similar to central Alberta;
- A growing level of experience and expertise amongst producers.

Some barriers to the development of an intensive livestock industry in northern Alberta do exist. The barriers may differ between livestock groups but some have common issues. Based on the discussions with producer groups, the following barriers were identified regarding the future development of intensive livestock operations in northern Alberta can be made:

- There is a need for clear and consistent regulations for ILO's;
- The government needs to level the playing field in the development of regulations to ensure there is a standard set of rules from municipality to municipality;
- There needs to be certainty and confidence in the approval system to protect existing investment;
- The province must assume a greater role and responsibility in land use planning if intensive livestock operations are to be successful. The delegation of decision-making responsibility to municipalities is not working;
- The lack of risk taking is a major barrier to the expansion of intensive livestock production in the north;
- The opportunities for off farm income in the north tend to be counter productive to investing in the livestock industry particularly in the Peace region;
- The current levels of cash flow among grain farmers does not allow the farming community to reinvest into livestock, even if they wanted to;
- Southern Alberta has been farming longer than northern Alberta. This has created wealth in the south, which in turn is now financing much of the increase in livestock production;
- There is a "cultural" barrier against larger foreign owned intensive livestock operations in favour of smaller family (community) run operations.

With respect to the poultry industry, a significant concern was raised regarding the supply-managed system. With the supply-managed industry, the industry is regulated through a Board consisting of producers. Since the inception of the system, there has been considerable consolidation in the industry. The result has been that the representation on the Board is overwhelmingly in favour of the bigger producers in that voting based on the amount of quota. The difficulty for smaller producers is that the larger producers create the rules and assign changes in quota. All the changes while voted on in democratic manner fail to recognize the smaller producers. Hence, while the market for fresh chicken grows in northern Alberta, local producers are unable to expand production to meet the growth due to restrictions placed on the producers by the Board that is dominated by larger producers.

There is clearly a great deal of opportunity to expand the livestock industry in northern Alberta. However successful growth in the industry must be sustainable. Where growth has occurred, it has been a result of careful investment, a willingness to take a risk and perhaps good timing. With the growth has come experience in terms of how to operate a successful business, to weather the up and down cycles of the industry. This growth has come through hard work and dedication and without artificial government programs. If the success is to be repeated, the blueprint must be followed.

Some of the other key factors in supporting a successful intensive livestock industry in northern Alberta might include some or all of the following factors:

- There is limited potential to expansion processing facilities in the north except to provide specialty processing i.e. bison, exotic livestock or "northern Alberta natural products;
- Niche markets will provide opportunities to some producers but the major economic impact of intensive livestock production will be in the expansion of the cattle and hog sectors;
- The expectation for the industry is to create a consistent supply of livestock for the market both quality and quantity;
- Growth will occur in the north but slowly due to lack of experience and wealth;
- Growth based on the expansion of existing producers will be more sustainable in the long run than artificial incentive programs to boost intensive operations;
- Farmers need to retain the ownership of cattle to increase wealth;
- Growth in the livestock industry in the south has come for a variety of reasons including experience;
- Access to adequate water supplies is important and while significant resources exist, licensing and environmental regulations make it difficult to access the sources;

Growth in the intensive livestock industry in northern Alberta would be best served by growing the industry locally. There are some opportunities for growth via outside (foreign) investment but there are questions around the long-term sustainability of these

operations. The livestock industry has grown in northern Alberta quietly and without much fanfare. With support in strategic areas in the future, the prospects for growth will continue to be strong.

RECOMMENDATIONS

The recommendations proposed focus on 6 main areas of the intensive livestock industry. They identify areas of action that are appropriate for the NADC to pursue. The recommendations place an emphasis on facilitation and support rather than direct intervention in the market place. The recommendations are as follows:

Recommendation #1 Promotion and Education

It is recommended that the NADC develop a list of livestock producers in northern Alberta and that the list be updated on a regular basis as the basis for developing workshops and other educational forums for expanding production.

It is recommended that the NADC in conjunction with Alberta Agriculture, Food and Rural Development develop a forum on the expansion possibilities of intensive livestock operations. The forum should endeavor bring together all those involved in the livestock industry to develop specific strategies for growing the intensive livestock industry in northern Alberta. The forum should be held on a bi-annual basis.

The forum should specifically target producers, processors, financial institutions, financial planners, accountants and other professionals who may be involved in the livestock industry. One of the primary purposes of the forum should be to develop alliances between producers and processors and financial institutions. It is recommended that the NADC bring producers and processors from southern Alberta to northern Alberta to meet with northern producers to exchange ideas and develop alliances and contacts.

It is recommended that the NADC encourage the participation of northern producers in trade shows and other public events in southern Alberta as a mechanism for espousing the opportunities in northern Alberta.

It is recommended that the NADC in conjunction with Alberta Agriculture, Food and Rural Development and municipal governments sponsor intensive livestock awareness programs for the purposes of educating the general public on the food safety and supply issues.

Recommendation #2 Land Use Regulations

It is recommended that the NADC to support the development of a provincial approval system for intensive livestock operations based on the technical merits of the application and to remove municipal decision making from the approval process.

It is recommended that the NADC support changes to the Municipal Government Act and the subdivision and development regulations that provide protection to existing or future intensive livestock operations from the encroachment of non-compatible land use activities.

It is recommended that the NADC ask the government to strengthen the requirement for municipalities to conform to the Provincial Land Use Policies.

Recommendation #3 Infrastructure

It is recommended that the NADC continue to monitor infrastructure programs to ensure that all programs are delivered on a province wide basis taking into account the unique circumstances of Northern Alberta.

It is recommended that NADC continue to push for improved infrastructure for northern residents.

It is recommended that the NADC support applications to develop regional water supply systems in northern Alberta particularly where the water systems may benefit livestock producers.

It is recommended that the NADC examine the concept of the agricultural industrial parks as means of encouraging the growth of the intensive livestock industry.

Recommendation #4 Supply Managed Livestock

It is recommended the NADC make representation to the government to modify the legislation governing the Alberta Chicken Board to ensure that small producers have a meaningful voice in the establishment and assignment of quotas.

It is recommended that the NADC request the government to allow chicken producers in northern Alberta to opt out of the Chicken Producers Board to establish their own quotas if changes to the current system can not be made.

Recommendation #5 Processing Facilities

It is recommended that the NADC work with existing processors in northern Alberta to develop niche market processing where required.

Recommendation #6 Access to Capital

It is recommended that the NADC support the expansion to existing loan programs to better meet the needs of the livestock industry. In addition, the development of a community bonds system to encourage the investment of local dollars into intensive livestock industry in northern Alberta should be considered. The development of a community bond system may have merit in providing non-traditional sources of capital to livestock operations.

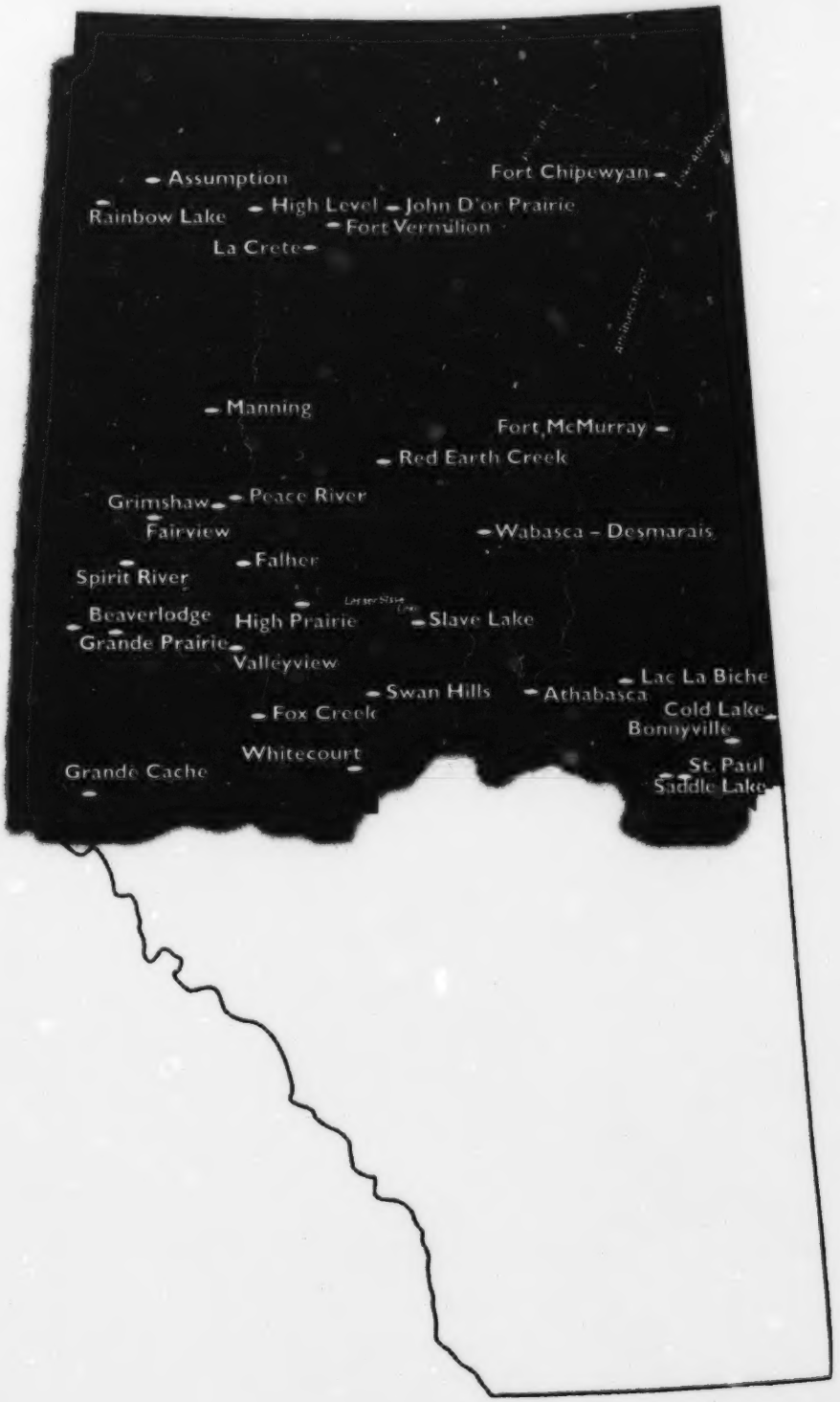
1.0 INTRODUCTION

The purpose of the Northern Alberta Development Council (NADC) as outlined in the Act is to "investigate, monitor, evaluate, plan, and promote practical measures to foster and advance general development in northern Alberta."

The NADC facilitates economic development in northern Alberta by promoting opportunities and addressing barriers to the north's development. The NADC has commissioned the consultant to review the opportunities for intensive livestock operations in Northern Alberta. The report will outline the opportunities, barriers and factors affecting and influencing the development of intensive livestock in northern Alberta. In addition the report will make recommendations aimed at growing the intensive livestock industry in northern Alberta. It will outline a series of actions that will be effective and viable in growing intensive livestock in the region. It should provide a blueprint for action to enhance the opportunities for intensive livestock operations. The area covered by the Northern Alberta Development Council is identified on Map #1.

Intensive livestock operations differ from other agricultural opportunities. Intensive livestock focuses on that part of the livestock industry where the numbers of livestock are such that special attention must be paid to how the industry develops. Special attention includes an examination of factors such as water supply, feed, manure disposal and odour issues, health and safety issues and surrounding land uses to name a few.

The purpose of this report will be to focus on the opportunities for intensive livestock operations in northern Alberta.


Assumption
Fort Chipewyan
Rainbow Lake
High Level
John D'or Prairie
Fort Vermilion
La Crete
Manning
Fort McMurray
Red Earth Creek
Grimshaw
Peace River
Fairview
Wabasca - Desmarais
Falher
Spirit River
Beaverlodge
High Prairie
Slave Lake
Grande Prairie
Valleyview
Lac La Biche
Swan Hills
Athabasca
Cold Lake
Fox Creek
Bonnyville
Whitecourt
St. Paul
Grande Cache
Saddle Lake

2.0 BACKGROUND

In examining the potential for intensive livestock development in Northern Alberta, it is prudent to understand the position of the provincial government in this industry. The following is a review of the relevant government department business plans.

In the most recent Speech from the Throne in February 2001, the government announced that "As Alberta continues to diversify its economy, it cannot forget the ongoing importance of the agricultural sector. The agriculture and food industry is a critical part of Alberta's economy and will continue to be a priority for this government."

2.1 ALBERTA AGRICULTURE, FOOD AND RURAL DEVELOPMENT

In the Business Plan for the department, both the Vision and Mission statements identify a focus on developing a world class, sustainable agriculture and food industry. The goals in support of this direction includes:

- Improve capacity to respond to opportunities for growth;
- Improve competitiveness of industry commodities, products and services;
- Increase amount of value added to industry commodities, products and services;
- Increase diversity of commodities, products and services;
- Increased capability of industry to manage risk.

The strategies and actions for achieving these goals include:

- Provide strategic information and intelligence to help industry identify growth opportunities;
- Work towards a more accountable and less costly grain handling and transportation system;
- Encourage the use of technologies that enhance competitiveness in crop and livestock production in Alberta;
- Encourage investment in value-added;
- Attract new capital investment for growth and diversification.

2.2 ALBERTA ECONOMIC DEVELOPMENT

The role of Alberta Economic Development in the Alberta's economy is to find new opportunities to expand business and create jobs. The department has identified Agricultural Products as an area in which the department has influence and an interest in the development of value-added opportunities.

The strategies and actions for achieving these goals include:

- Increasing the participation of Alberta communities in regional economic developments;
- Increasing the number of investment leads generated and serviced within target markets.

A number of outcome indicators for the department identify growth targets for agri-food exports and farm cash receipts. Increasing livestock production in northern Alberta will assist in meeting these targets.

2.3 NORTHERN ALBERTA DEVELOPMENT COUNCIL

The Northern Alberta Development Council has a goal of promoting opportunities and addressing barriers to the north's development. A key strategy for dealing with these issues includes promoting value-added agricultural development.

The pursuit of intensive livestock opportunities in northern Alberta goes along way to achieving this objective.

2.4 UNDERSTANDING INTENSIVE LIVESTOCK

As the demand for red meat continues to grow on a global basis, the requirement to produce a supply for this demand will also grow. Agriculture is practiced in all provinces in Canada, and many provinces are in a strong position to expand to meet the export market. Intensive livestock operations are expanding in all parts of Canada in response to market demands.

Many factors beside the potential expansion of the global market are pushing the growth of intensive livestock operations. Changes to the Crow benefit have made the transportation of grain to market significantly more expensive. Farmers, as are all businesses, constantly seek ways to become more efficient and to reduce margins and risks. This includes reducing transportation costs.

In addition, basic economics comes into play. Larger operations tend to be more efficient than smaller operations. Along with the efficiencies achieved due to scale, there usually is an increase in productivity because of better management practices. For example, with the specialization of the rearing of animals by stages, once an entire production unit has been raised, it can be shipped off to the packers, the barn cleaned and disinfected before a new unit is brought in. This enables livestock to be raised in a cleaner, healthier environment. This has two important implications. A cleaner environment means healthier animals. Healthier animals mean less disease therefore fewer drugs are needed.

Lastly, better genetics and disease control are more easily attained with larger operations again in large part due to the economies of scale and the desire of large operations to ensure quality control for consumer protection. All of these factors have contributed to the growth in the intensive livestock business.

Agriculture is a complex business. One of the important aspects in considering the intensive livestock issue is defining intensive livestock. Utilizing the parameters of the 2000 Code of Practice for Responsible Livestock Development and Manure Management, the definition of an intensive livestock operation must meet three criteria.

It must meet or exceed the minimum threshold numbers, density of confinement and continuous confinement interval. If any one of the criteria is not met, the use is not considered intensive.

For the purposes of this report, the primary focus will be intensive livestock as defined in the 2000 Code of Practice. This gives one some parameters with which to deal.
However some of the issues raised in this report are equally true of other livestock operations notwithstanding the fact that such operations may not be considered intensive by the definition provided by the Code of Practice.

This factor may be relevant to the examination of intensive livestock operations in the north. One may find that there will be a significant increase in livestock production without the increase becoming intensive. In another aspect, a use may be intensive but not at the scale of intensive livestock operations in other areas of Alberta.

3.0 METHODOLOGY

In developing this report, a major emphasis was placed on discussion with existing livestock producers. To this end, two focus groups were held, one in Grande Prairie and one in Glendon. The purpose of the focus groups was to review relevant issues with producers regarding opportunities and barriers to intensive livestock operations.

Much of what is in this report is reflective of the discussion with producers. In addition, there was an extensive literature search of relevant material. Interviews and discussions were also held with other government and private individuals connected with the livestock and agricultural industry.

4.0 OPPORTUNITIES

It is widely viewed that the development of intensive livestock operations will be beneficial to the economic development in Northern Alberta. More specifically, the development of intensive livestock operations might achieve the following benefits for farmers in northern Alberta.

- Result in the diversification of the agricultural industry in the north;
- Improved cash flow for farmers through alternative markets for grain;
- Better utilization of land base in the north;
- Reduction in the cost of grain transportation to the farmer;
- Development of additional value-added opportunities.

4.1 STRENGTHS OF THE REGION

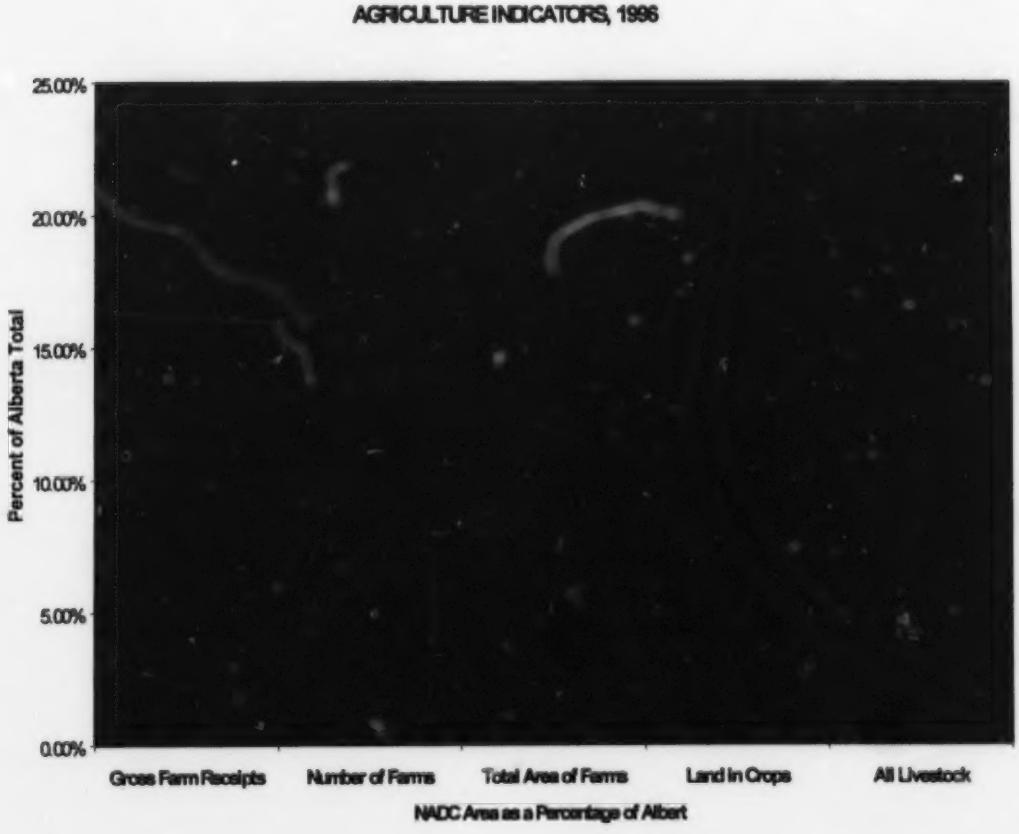
Northern Alberta has two main agricultural areas. The first area is located on the eastern side of the province and extends from the Saskatchewan border westerly to the Athabasca area. The second area is known as the Peace country and extends from Grande Prairie, north to High Level and Fort Vermillion.

Northern Alberta has several distinguishing characteristics when it comes to agriculture. It is strategically located in terms of distance to the major western United States and Mexican markets. It has strong links to both Asian markets through the Ports of Vancouver and Prince Rupert.

4.1.1 Land Base

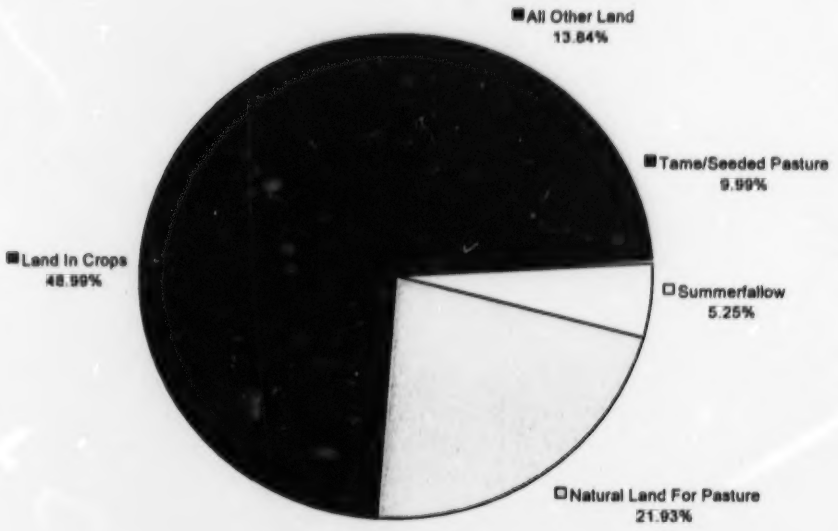
One of main strengths of the region is its abundant land base. Northern Alberta contains some 11,465 farms on over 9.8 million acres. This represents 19% of the agricultural base in Alberta. Northern Alberta had 11% of the livestock production of Alberta in 1996.

The following charts and graphs indicate some of the background data related to the agricultural industry in northern Alberta. The data identifies northern Alberta factors and compares it to the overall provincial base.



The purpose of this chart is to indicate the overall significance of agriculture in northern Alberta to the province as a whole. The chart also indicates the more dominant position of crop production to livestock production at the present time.

Farm Land Use Within NADC Area, 1996



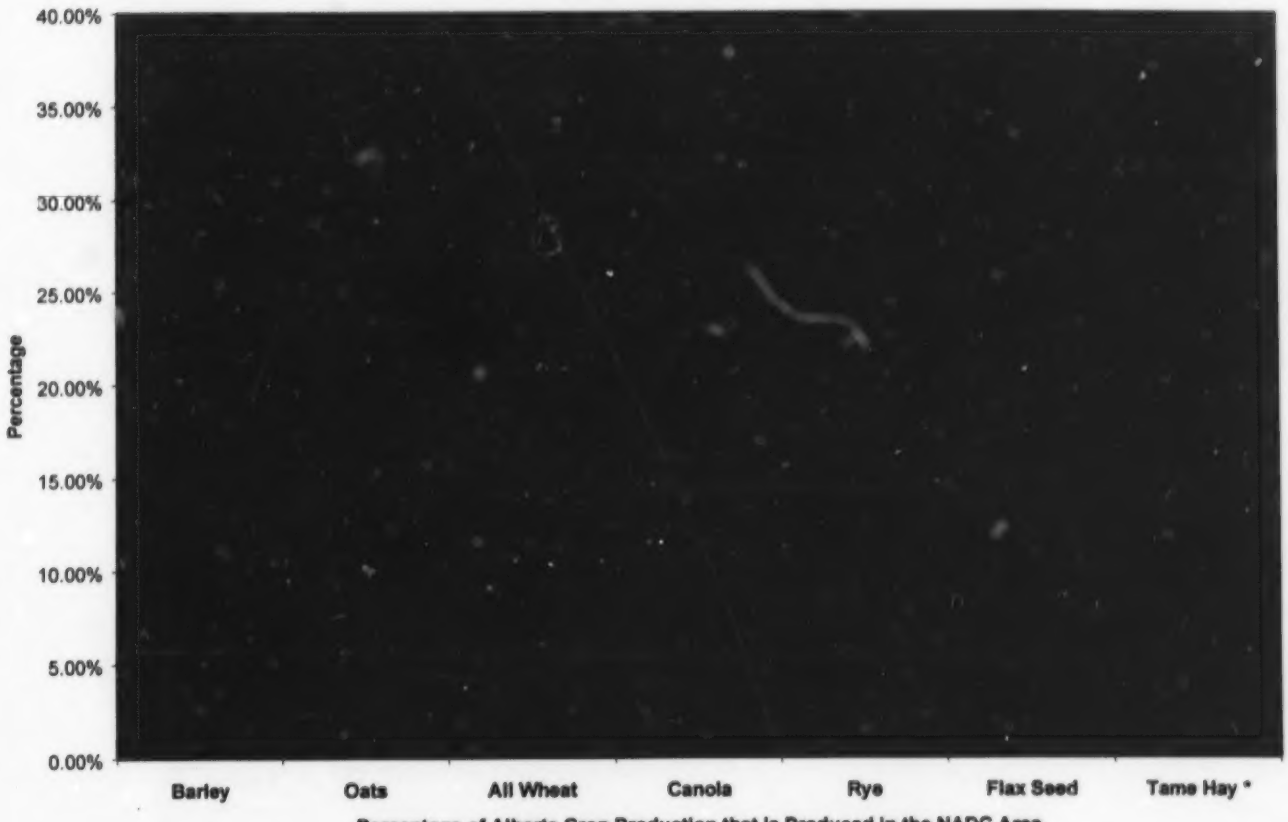
This chart identifies the current use of the agricultural land in Northern Alberta, again showing the predominance of cropland to other uses. The following charts are useful in that they specify the actual amount of land in production, in pasture and the type of crops.

Farm Land Use, 1996

Land Use (1000 Acres)	NADC Area	Alberta	NADC as a Percentage of Alberta
Land in Crops	4,822.70	23,590.00	20.40%
Natural Land for Pasture	2,158.70	16,347.30	13.20%
Summer Fallow	517.10	3,550.30	14.60%
Tame or Seeded Pasture	983.6	4,731.10	20.80%
All Other Farm Land (including Christmas Tree Area)	1,362.50	3,745.71	36.40%
Total Area of Farms	9,844.60	51,964.40	18.90%

Source: Alberta Agriculture, Food and Rural Development, 1996 Census of the Agriculture

Crop Production, Alberta and NADC Area



Percentage of Alberta Crop Production that is Produced in the NADC Area

CROP PRODUCTION, 1996

Crop Production (1000 Tonnes)	NADC Area	Alberta	NADC Area as a Percentage of Alberta
Barley	820.87	7,076.00	11.60%
Oats	280.7	1,079.50	26.00%
All Wheat	1,090.69	7,789.10	14.00%
Canola	432.33	1,701.00	25.40%
Rye	1.50	64.10	2.30%
Flax Seed	3.40	20.30	16.80%
Tame Hay*	2,654.52	7,800.00	34.00%
Total Crop Production	5,284.01	25,530.00	20.70%

Source: Alberta Agriculture, Food and Rural Development, 1996 Census of Agriculture
* Comprises both alfalfa and grasses.

4.1.2 Livestock

Historically, the livestock industry in northern Alberta has undergone several changes over the years. There has always been a predominance of cattle and hogs in the livestock market. Other species have played a smaller role

The following charts indicate some relevant information regarding the livestock industry. A few observations are in order. The number of cattle in northern Alberta has increased from 1971 to 1996. As a percentage of the Alberta total amount of cattle, the percentage has risen slightly from 7.9% to 11.6%.

In terms of hogs, since 1971, the number of hogs has decreased both in terms of numbers and percentage of the Alberta production total. In 1971, northern Alberta contributed 14.6% of the Alberta market. This number has shrunk to 6% by 1996.

Sheep and lambs have grown both in actual numbers and as a percentage of the Alberta total.

Data respecting other forms of livestock have changed. Poultry production has not been measured in the last census in 1996 and has been replaced with other forms of livestock, namely goats, horses, bison, elk, and deer.

It is significant to note that northern Alberta contains 45.9% of the Alberta bison herd.

The following chart illustrates the number of livestock in northern Alberta at the time of the last census. It is useful to note the relative numbers of animals and the percentage in each category. Over 90% of the livestock production involve cattle or pigs.

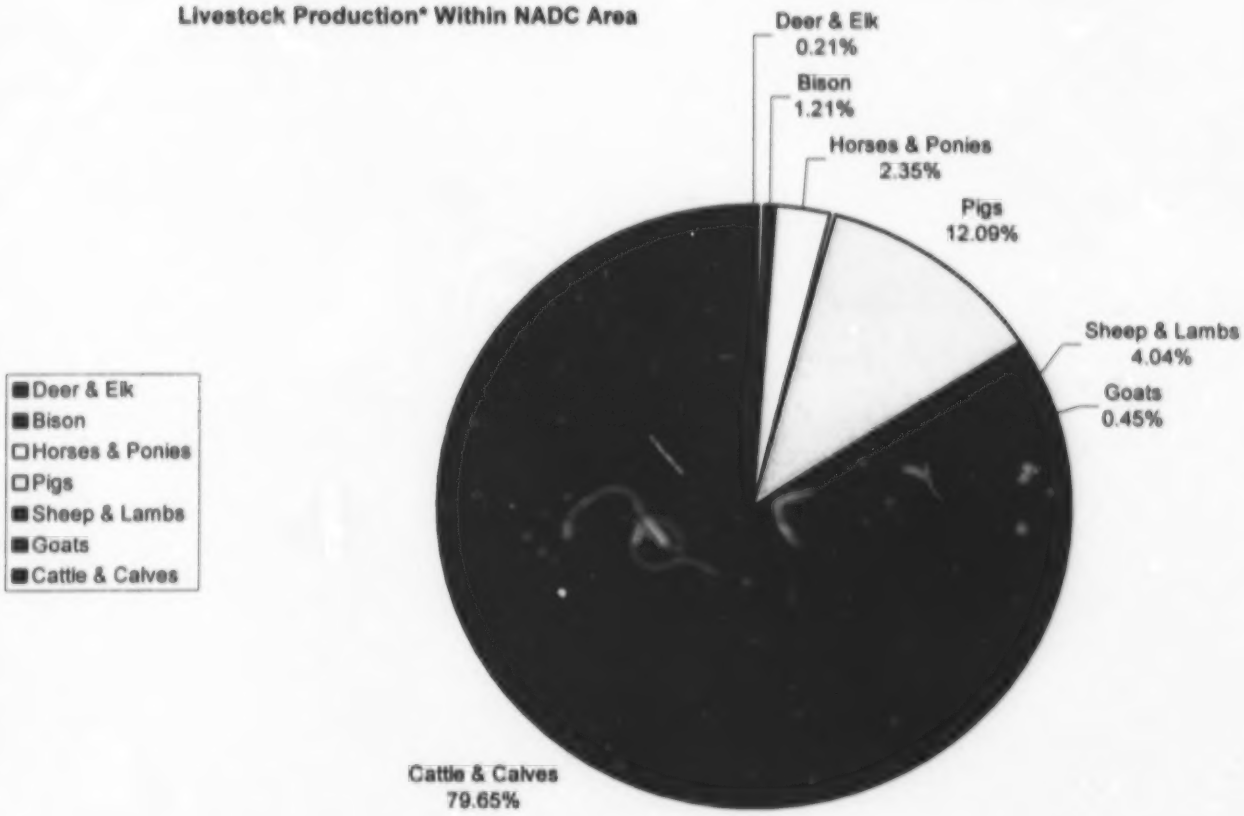
Livestock Production* within the NADC Area, 1996

Type of Livestock (Head Count)	NADC Area	Percentage Breakdown of NADC Area Livestock Production	Percentage Breakdown of Alberta Livestock Production
Cattle and Calves	689,004	79.66%	72.93%
Pigs	104,544	12.09%	21.23%
Sheep and Lambs	34,935	4.04%	3.19%
Goats	3,858	0.45%	0.40%
Horses and Ponies	20,346	2.35%	1.84%
Bison	10,447	1.21%	0.28%
Deer and Elk	1,805	0.21%	0.13%
Total	864,939	100.00%	100.00%

Source: Alberta Agriculture, Food and Rural Development, 1996 Census of Agriculture

*Livestock production is measured by animal head count. This includes both young & mature animals.

The following chart is intended to compare livestock production in northern Alberta with the livestock production in the rest of the province.

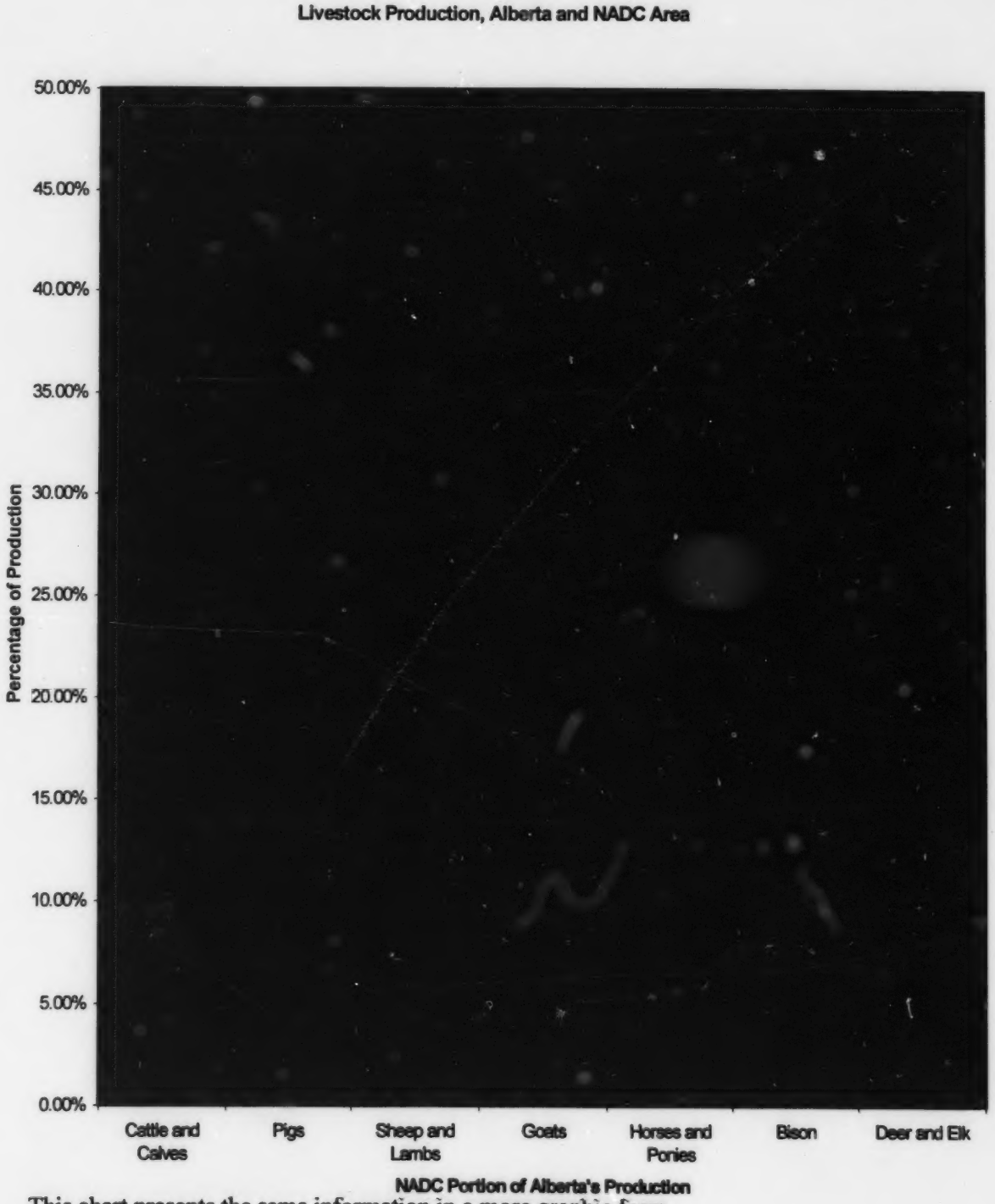


Livestock Production,* 1996

Type of Livestock (Head Count)	NADC Area	Alberta	NADC as a Percentage of Alberta
Cattle and Calves	689,004	5,942,257	11.60%
Pigs	104,544	1,729,810	6.00%
Sheep and Lambs	34,935	259,817	13.40%
Goats	3,858	32,960	11.70%
Horses and Ponies	20,346	149,960	13.60%
Bison	10,447	22,782	45.90%
Deer and Elk	1,805	10,687	16.90%
Total	864,939	8,148,273	10.60%

Source: Alberta Agriculture, Food and Rural Development, 1996 Census of Agriculture

*Livestock Production is measured by animal head count. This includes both young & mature animals.



This chart presents the same information in a more graphic form.

The purpose of the next two charts is to identify any changes or trends to the livestock industry over the past 25 years. In addition to identifying changes to the species counted, there has been a noticeable shift in the numbers of animals in the past 25 years. The second chart identifies the Alberta totals and the third chart puts the production into percentages to better understand the production in the Alberta context.

Historical Livestock Populations

	1971	1981	1986	1996
NADC AREA				
Cattle & Calves	293 853	399 220	416 897	689 004
Pigs	291 779	112 520	111 933	104 544
Sheep & Lambs	25 369	24 570	19 087	34 935
Hens & Chickens	726 314	635 851	607 289	
Turkeys	56 390	8 539	9 446	
Ducks	4 793	2 589	2 602	
Geese	4 080	7 133	3 020	
Goats				3 858
Horses and Ponies				20 346
Bison				10 447
Deer and Elk				1 805
Total	1 402 578	1 190 422	1 170 274	864 939

ALBERTA				
Cattle & Calves	3 702 125	4 192 887	3 827 143	5 942 257
Pigs	1 995 047	1 199 397	1 454 824	1 729 810
Sheep & Lambs	244 926	201 294	179 123	259 817
Hens & Chickens	7 923 093	9 109 525	8 852 415	
Turkeys	896 301	903 252	763 485	
Ducks	112 167	129 147	152 051	
Geese	78 421	68 563	100 000	
Goats				32 960
Horses and Ponies				149 960
Bison				22 782
Deer and Elk				10 687
Total	14 952 080	15 885 065	15 329 041	8 148 273

NADC AREA AS % OF ALBERTA--HISTORICAL

	1971	1981	1986	1996
Cattle & Calves	7.90%	9.50%	10.90%	11.60%
Pigs	14.60%	9.40%	7.70%	6.00%
Sheep & Lambs	10.40%	12.20%	10.70%	13.40%
Hens & Chickens	9.20%	6.90%	6.90%	
Turkeys	6.30%	0.90%	1.20%	
Ducks	4.30%	2.00%	1.70%	
Geese	5.20%	10.40%	3.00%	
Goats				11.70%
Horses and Ponies				13.60%
Bison				45.90%
Deer and Elk				16.90%
Total	9.40%	7.50%	7.60%	10.60%

This chart indicates that cattle production as a percentage of the Alberta total has actually increased over the past 25 years while hog and chicken production has declined. Some species cease to be counted while others such as bison, elk and deer have been added.

In addition to a large land base, the cost of agricultural land is relatively inexpensive compared to the cost of farmland in other areas of Alberta. Taxes in Alberta are lower that those of competing provinces.

The ability to grow fibre is a major strength in northern Alberta. Fibre is defined as pasture, hay, legumes, and straw.

4.1.3 Demographics

Generally speaking, the region also has a relatively sparse population compared to other areas of Alberta. Northern Alberta has a population density of .66 person per square kilometre. The Alberta average is 4.2 persons per square kilometre. In the context of intensive livestock operations, a less dense population would meet less nuisance factors in location such operations.

Demographically, the rural population in northern Alberta can best be described as entrepreneurial. In the Peace, many of the farmers are 1st and 2nd generation farmers who have had to work extraordinarily hard at making farming viable. The agricultural industry on the eastern side of the province is slightly more mature by a generation.

4.1.4 Transportation

The transportation network linking the north to the market areas, specifically the road system continues to improve. The development of the North-South Trade Corridor, from the BC border to Montana and beyond is the backbone of a modern transportation system. The rail system is under going significant changes both in terms of ownership and consolidation of rail facilities such as elevators.

4.1.5 Climate

In terms of climate the north is similar to other areas of Alberta. In terms of rainfall and snow load, the amount of precipitation received on an annual basis compares very well to other areas of Alberta. For example, Lethbridge receives approximately 390mm (15.35 inches) of total annual precipitation, and Brooks, 340 mm (13.3 inches). In the NADC area, Grande Prairie and Fairview receive approximately 450 mm (17.7 inches), St. Paul, 440 mm (17.3 inches), Manning 390 mm, and Fort Vermillion, 380 mm of total annual precipitation. These numbers compare favorably with the south, particularly the more northerly communities.

In terms of other climatic conditions, there are a multitude of records related to weather and agriculture. The charts and maps of weather patterns in Alberta are well documented. An analysis of the data indicates that while differences do exist, the differences are not extreme. Indeed many areas of northern Alberta compare favorably with the south in critical measurement areas.

Although much of the data collected is generally referenced to crop production, there is certain data that is useful to livestock producers. Precipitation levels indicate the relative dryness of an area, an attribute when raising cattle. Similarly, temperature is important to crop production and to the raising of livestock. Warmer temperatures or heat units, particularly during the winter months can have a significant impact on the ability of an animal to gain weight. There is no doubt that the south has a higher number of total degree days but the north does compare well to the central part of Alberta. Frost-free periods also compare well with central Alberta. Parts of the Peace country also have the benefit of chinook winds during the winter.

4.2 OVERVIEW OF THE MEAT MARKET

Alberta Economic Development has a very favourable outlook on the future of the Alberta meat market. In 1999, the meat market produced some 3.9 billion dollars in revenue in Alberta. It is Alberta's third largest manufacturing industry. The red meat market includes beef and hogs. The poultry, sheep and bison markets were also significant players.

It is expected that the global market will continue to grow. As with many other commodity markets, growth will be subject to up and down cycles. It is important to understand that cycles will occur and that the cycles will have an impact on the ability to expand livestock production.

The recent outbreak of foot and mouth disease in Europe has major implications for the Alberta market. As the spread of the disease continues to grow, the destruction of herds becomes more widespread. The loss of the herds will mean increase demand for outside sources of beef and replacement stock. The net effect will be to boost prices and demand in Alberta.

Alberta has the technology to compete globally in the livestock market. Northern Alberta is also well positioned to be a part of Alberta's growth.

The red meat market like many other industries is consumer driven. Consumers make the choice of what they eat and what they will pay for food, including meat. In the past, consumers have been more worried about price, but as times goes on other factors are influencing consumer choice. Issues such as food safety and genetically modified foods are having a large impact on consumer choice, particularly in Europe.

This change may have an impact on the livestock industry in that it may create a demand for specialty meats are grown naturally. Other implications for livestock producers include the overall safety of food. Intensive livestock operations can have the advantage of quality control in the raising and management of livestock. With this type of management comes a higher capital cost that must be offset by more animal units.

4.2.1 Breakdown by Type of Livestock

In order to identify the opportunities that might exist for intensive livestock in northern Alberta, an examination of the many components of the livestock industry would be in order.

4.2.1.1 Beef Industry

The beef industry is a major industry in Alberta. The beef industry has an extensive presence throughout the province. Beef production includes cow/calf production, breeding stock, backgrounding heifers and steers and major feedlots.

Alberta's beef industry continues to expand. Most of the beef is exported out of the province with the primary markets in British Columbia and central Canada. The major international markets are the United States and Japan. The European markets may have significant upside given the present situation.

The beef industry can be broken down into several sectors, all of which may have potential for growth in the north. Northern Alberta currently has about 11.6% of the Alberta cattle herd. It also appears that there is a growing trend to specialization in the raising of feeder cattle. The two main production areas are cow/calf operators and feedlots.

4.2.1.2 Cow/Calf Sector

The beef sector starts with the cow/calf sector. This domain starts with the rearing of calves. It has changed significantly over the past 10 years with average herd size increasing in numbers of animals per herd. A major constraint to future growth of the cow/calf herd is pasture capacity.

According to the Department of Agriculture, Food and Rural Development, in the northeast part of the province, data indicates that without improved pasture management and the alternative use of feeds such as straw and chaff, there is not sufficient production capacity to withstand problems such as drought or hay shortages.

On the other hand there is slightly more pasture than demand in the central north and Peace regions of Alberta.

4.2.1.3 Feedlot Sector

The feedlot sector consists of backgrounding and finishing feedlots. A major issue to the development of feedlots is manure odour and management. In existing areas of Alberta

where the finishing feedlots are presently concentrated, rural population densities will limit future expansions. This may create an opportunity for expansion in the less populated areas of the province including the north.

The supply of water is a huge factor in the location of feedlots. To date, the supply of water has largely been groundwater. The availability, yields and quality have been issues facing the north. Surface water can be used if the source includes a permanently flowing waterbody. This includes rivers, irrigation canals and reservoirs.

Alberta Agriculture, Food and Rural Development have indicated that a doubling of Alberta's feedlot sector is possible. As expansion is limited in areas of existing areas because of manure odour spacing requirements, other areas of Alberta including the north could accommodate new feedlots.

4.2.1.4 Hog Industry

In the past 25 years, the pork industry has doubled in terms of numbers. This has meant an average annual growth rate of 4.2%. As the global market for pork continues to grow, Alberta is well positioned to take advantage of this growth.

Projections indicate that production is expected to double in the next 5 years.

As with the cattle industry, a certain amount of specialization is currently taking place. Each stage may be conducted at a different location with different facilities. The hog industry can start with the farrow barn. The second stage is the weaner barn followed by the finishing barn. The separation of stages is useful in maintain the health of animals. Once a cycle is complete with an operation, the facility can be completely cleaned and disinfected, helping to ensure that the opportunity for disease is minimized.

4.2.1.5 Poultry Industry

The poultry industry has shown tremendous growth in the past few years with annual growth rates averaging 6%. While annual meat consumption per capita in Canada has increased by 5.5% from 1984 to 1994, the per capita consumption of chicken has increased by 40.1% and turkey by 15.8% over the same time period.

There has been a trend to smaller numbers of larger farms. This trend has consequences for producers in northern Alberta who have found it difficult to compete in the tight marketing system imposed by the Association. Quota is difficult, if not impossible, to come by, and poultry production in northern Alberta has declined in favour of larger, more central operations in the south. This has occurred, notwithstanding the fact that the entire production in the north is consumed in the north, and the potential for additional expansion is excellent.

4.2.1.6 Bison Industry

The bison industry in Alberta continues to grow as the demand for buffalo products particularly meat also grows. The bison industry has similar requirements to the cattle industry in terms of land productivity, fencing, facilities and feed costs.

There is excellent potential for expansion in the bison industry. The primary purpose of the bison industry in Alberta has been to produce breeding stock for developing herds. As the demand for bison meat increases, so will the demand for the animals. Currently northern Alberta has almost 50% of the Alberta. Given the availability of inexpensive land, good supply of feed, it is expected that this sector will see significant growth.

4.2.1.7 Dairy

Alberta currently has 1000 diary producers. The Alberta Dairy Control Board is in the business of promoting the growth of the dairy industry. The Board has a number of goals with respect to the future of the industry. They include ensuring a globally competitive industry, to expand exports of dairy products from Alberta and increase farm production, and to increase the value to Alberta's milk supply. It appears, however, that the goals must still be met within the context of a supply-managed system. As such, the opportunities for expansion for northern producers may be limited.

4.2.2 Other Alternative Livestock

The development of other alternative livestock opportunities have been well covered in the report entitled Market Opportunities for Alternative Livestock Products Report prepared by Bruce Rutley, April 2000.

4.2.1 Sheep and Goats

In contrast to other meat markets, the demand for lamb on a per capita basis has been declining. There may be a number of reasons for this, including general unfamiliarity with lamb products, higher retail prices compared to other products, increased consumption of poultry, and increased consumption of fast foods that are predominately beef and poultry. Nevertheless, there may be an opportunity for increased lamb production.

OBSERVATION

Given the dominance of the cattle industry in terms of numbers and percentages, to achieve the greatest economic impact in the future, the emphasis should be on the development of the cattle industry followed by hogs. The balance of the livestock industry is considered minor. Therefore, the focus of this report will be to concentrate on the opportunities for cattle and hogs.

5.0 BARRIERS TO THE DEVELOPMENT OF INTENSIVE LIVESTOCK INDUSTRY

In requesting this report, the NADC have reflected upon the fact that most of the major expansions to intensive livestock operations have occurred in southern Alberta. Part of the purpose in developing this report is to identify and examine the barriers that may exist to expansion in the north. Many barriers seem to exist which works against the development of intensive livestock in northern Alberta. Barriers are listed in four broad categories. They are as follows:

- Environmental
- Economic
- Social
- Governmental

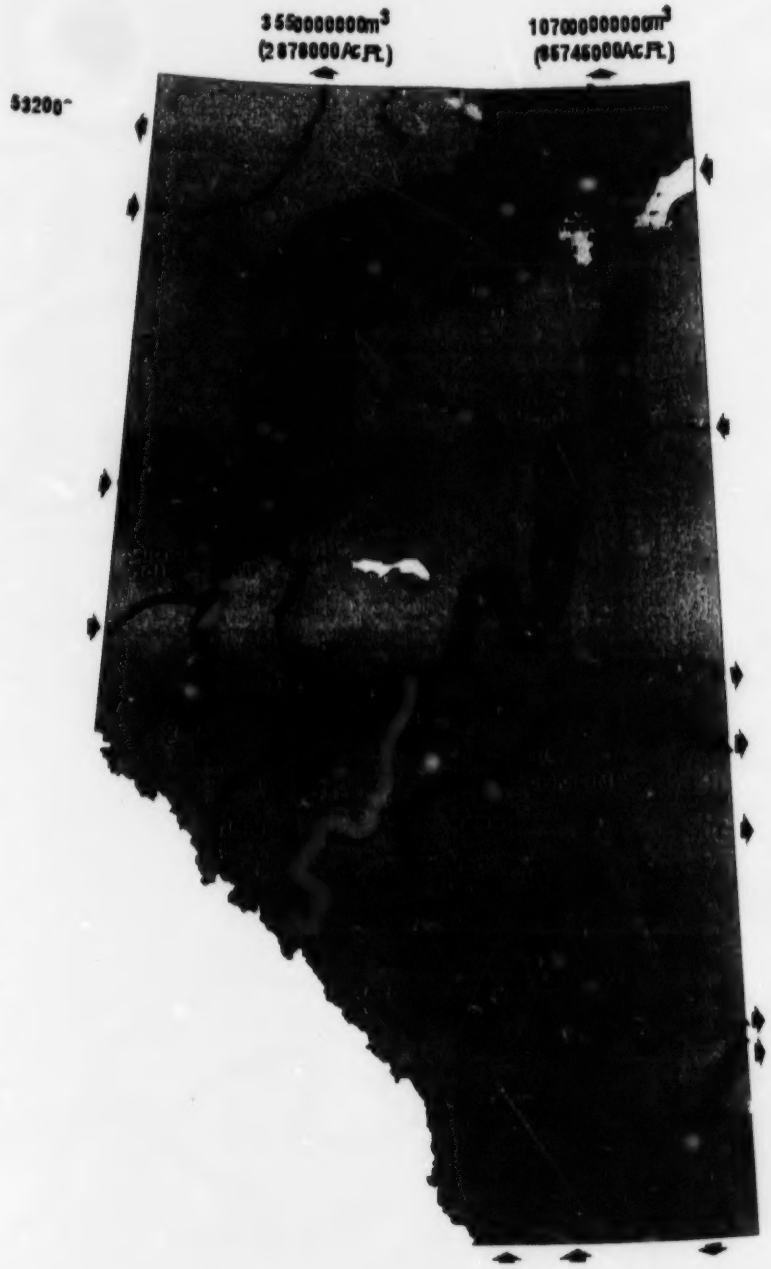
5.1 ENVIRONMENTAL

5.1.1 Water Supply

One of the most important elements to a successful intensive livestock operation is the provision of a reliable water supply. There are some areas of the province where a reliable water supply, either groundwater or surface water, is limited including parts of northern Alberta.

Insofar as northern Alberta is concerned, there are three major water basins: the Peace, the Athabasca, and the Beaver River systems. These river basins handle enormous volumes of water, particularly when compared to southern Alberta. In various water studies conducted over the years, the major issued with water is the potential for contamination of the water supply by chemicals used in agricultural operations. Supply, although not as well developed as southern Alberta through dams and irrigation districts, can be more plentiful that other areas of the Province.

Although the north has significant amounts of water, obtaining the water can be most difficult. Much of the water in the region is located in rivers at the bottom of some deep valleys. Recently, the regulatory approval for the use of water has increased significantly by the use of licensing water users. The intent of the regulation is to ensure legitimate users have access to sufficient supplies. However, more recent experiences in the MD of Smoky suggest securing supplies for new operations are difficult. The licensing requirements and environmental restrictions have the potential for obstructing the development of intensive livestock operations.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(250000Ac.Ft.)
Peace River
Athabasca River
Clearwater R.
Milk River
Alberta
ENVIRONMENT & PROTECTION
MEAN ANNUAL
RIVER DISCHARGES
Total outflow 12642 1000000m³(10298 1500 Ac.Ft)
Total inflow 7268520000m³(5893500 Ac.Ft)
Inflow and outflow values represent the annual volume.
Based on recorded data to '91

Generally it does not appear that the supply of water is a major limiting factor in the development of intensive uses. However accessing the supply may be a major stumbling block to the development of intensive livestock operations.

5.1.2 Environmental Issues

The term environmental issues, as far as it relates to intensive livestock operations, include issues involving noise, odour, and the impact on local air and water. Primarily focuses on one aspect-- manure management. Public concern for this aspect of intensive livestock management is growing.

The present legislative framework largely provides guidelines to intensive livestock operators. There has been a large focus on successful manure management including the collection and storage of manure on site and disposal of manure. The Province has gone to great lengths to develop guidelines that address manure management. The Code of Practice for Responsible Livestock Development and Manure Management was approved in 2000, and is now being implemented throughout the Province.

With respect to the second issue, other issues arise. The first is the issue around odour, particularly as it impacts non-agricultural uses, mainly residential, in the rural area. Non-agricultural acreage's that are not familiar with the livestock operations and the smell associated therewith can create a conflict with the livestock operator.

In addition, the spreading practices can lead to issues around runoff, nutrient leaching into groundwater and soil saturation. The issues in this regard are ones relating to monitoring and enforcement, as well as the responsibility and cost for each.

Existing producers are well aware and are supportive of the legislation. Well-established operators know that manure management is an important issue and most have taken steps to modify operations to collect runoff in lagoons. The increased use of manure as a fertilizer has potential. However, in large grain farming operations, the application of fertilizers is highly organized and mechanized. It is difficult for these farmers to adjust their operations to accommodate other forms of fertilizers.

Soils in northern Alberta are well suited to handle the application of manure.

The climate of northern Alberta is not significantly different than southern Alberta. The south may be somewhat dryer and warmer but the climate in the north should not be a barrier to the development of intensive livestock production. There are a number of myths regarding climate, which should be dispelled.

One of the benefits to the north particularly the Peace country is the buffer of the forest between the south and the north. This buffer can protect the herds in the north from any herd health problems in the south.

5.2 ECONOMIC

5.2.1 Feed

The requirement of a ready feed supply is apparent. Northern Alberta has 34% of the province's land base in either natural pasture or tame or seeded pasture. In addition, the north produces nearly 12% of the provincial barley, 26% of the oats, and 34% of the tame hay supply. Other specialty crops that can be used for feed are also growing in popularity.

There does not appear to be an issue is the availability of feed insofar as a limiting factor in the development of intensive livestock is concerned.

5.2.2 Transportation

The elimination of the Crow Benefit has had a major impact on the agricultural industry. Simply put, the elimination of the Crow Benefit means that farmers no longer receive any support to offset the transportation costs of moving product, mainly grain, to market. The impact is simple; the farmer must absorb the transportation costs of moving product to market.

In this day and age of increasing energy costs, this issue is becoming more and more expensive. Transportation issues are growing more important to the success of any agricultural operation. There is an important role that the intensive livestock industry can play in the success of other agricultural operations. To this end, there are a number of issues associated with transportation.

The first issue is the distance to market. This is an issue that affects all goods and commodities coming out of northern Alberta. With respect to agriculture, the distance to market has two distinct, but inter-related components.

The first is the distance to the elevator, the entry point of grain to the export market. During the past few years, a large number of rail lines have been abandoned. This has led to a reduction in the number of grain elevators at strategic locations. The impact of these decisions has meant longer hauling distances to the elevator. This additional cost must be borne by the farmer.

Secondly, and equally important, is the distance to the major ports. While northern Alberta shares some locational advantages relative to distance to the major ports, access to an affordable and efficient handling and transportation system remains a central goal. The costs of an inefficient system are also borne by the farmer.

Freight costs were identified by some as a limiting factor to the development of intensive livestock operations. However, some producers also indicated that transportation from feedlots to packing plants is not an issue. The freight costs are borne by the processors and equalized among the producers from across the province. The processors require a large consistent supply and thus are willing to assist in the transportation costs to ensure the supply.

A strong and viable intensive livestock industry can do much to address the transportation issues affecting farmers. In the Peace region of northern Alberta, farmers send both cattle and barley south to be finished. On the eastern side of the province, the industry is mature and significantly more finishing goes on. The farmers on that side of the province have recognized the economic value of keeping products local.

If the price of barley is $2.75 per bushel, FOB Lethbridge, the farmer in the north likely receives only $2.50. The difference is freight costs. If the farmer was to sell the barley locally, the $0.25 per bushel savings represents a return of 10% over the price in Lethbridge.

One must recognize that the transportation issue applies equally to grain and oilseeds as it does to livestock. An increased presence of livestock in the north would give northern grain farmers a built-in market for their grain, reduce the cost of transportation and put more money in the pockets of the farmer.

5.2.3 Financial

There is considerable cost to establishing an intensive livestock operation. It can be capital intensive, and therefore expensive. The sources of money include owner equity, financial institutions, and government and outside investors.

The role of financial institutions is important to the future success of intensive livestock operations. They can provide a much-needed source of capital for the farmer. In order for the relationship to work, the farmer must keep his banker informed of all plans. The banker must be educated in the intricacies of livestock management in order to assist in overcoming the cycles of livestock. Generally producers feel that bankers are not well educated on the potential of the industry. In addition, banks are not always prepared to supply capital to intensive livestock producers.

From the bank's perspective, they want to see strong management practices in the farming operation. History is the biggest indicator of what might happen in the future so experience is important. Investment will go to the lowest cost producer.

In terms of encouraging the investment of existing grain producers to retool their operations into livestock, current cash flows do not allow this to happen. The commodity prices for grains are too low to enable farmers to reinvest into the infrastructure necessary to produce livestock.

5.2.4 Related Infrastructure

Related infrastructure includes paved roads. Access to paved roads to avoid seasonal road bans can be very important. One of the critical issues facing livestock producers is the requirement to get supply to market on a consistent and timely basis. Limitations to access of the operations can have a negative impact on potential operators.

In addition, the operation needs to ensure that deliveries of feed and stock are likewise not impacted by seasonal constraints.

There does not appear to be a limitation on the availability of power or natural gas for any intensive operation. However, many operators did identify that the costs to the producer of paying for the capital costs of the installation of these services are very high and do act as a deterrent to the investment in intensive livestock operations.

5.2.5 Economies of Scale Factor

Economic factors will affect the growth of intensive livestock operations. Large-scale operations have built-in efficiencies that cannot be matched by small operators. For example, the ability to purchase large numbers of stock, to influence the pricing, adjust rapidly to changing markets, weather the cyclical markets, and attract capital investment are easier to do with larger operations.

The larger operations may have large cash reserves to purchase product even if the price of the product is low.

5.2.6 Outside Investment in Intensive Livestock

It appears that much of the investment in intensive livestock has come from existing producers looking to expand. While there has been some injection of foreign money into the system, the bulk of the investment has been Canadian generated.

Where foreign money has come into the picture, i.e. the Taiwan Sugar Company, there has been a great deal of resistance to the presence. A similar attitude might be found in northern Alberta.

In terms of other foreign money such as European money, there has been some investment in Alberta. The investment seems to be targeted towards existing operations in locations that are closer to larger urban areas. There are two main reasons for this.

Firstly, the investors can afford to purchase higher cost land. The land costs are still less that land costs in Europe.

Secondly, the immigrants prefer to live closer to larger urban areas for cultural and social reasons. It is difficult for northern Alberta to compete with these factors.

5.2.7 Access to Processing Facilities

There are some world class processing facilities located in Alberta. Unfortunately none of the facilities are located in northern Alberta. All of the current facilities have capacity to grow and therefore it is unlikely that any new facilities of the same magnitude will be built.

Smaller meat packers located throughout the province including some in the north augment these large processing plants. It is not known how many small plants are located in the north.

It was expressed by some producers that it would be advantageous to have a processing facility located closer to home. However, in terms of a world scale facility, this is unlikely to happen. There may be some opportunity for the smaller plants to expand but the expansion would like have to be based on the development of specialty products not on volume processing.

5.2.8 Consumer Demand

In the end, consumer demand will have the largest impact on the intensive livestock business. It is expected that consumer demand will come in two forms, the demand for a low cost product and a demand for safe food source.

With respect to the first requirement, the industry has responded by creating larger more efficient processing plants. These larger plants require a steady supply of product. In addition to the steady supply is consistent quality in the livestock to be processed.

In terms of food safety, particular attention is paid to the safe handling and production of food. Larger plants can have advantages over smaller operations technologically to ensure safe handling of food production.

The same is true for livestock production. Larger barns can produce cleaner and healthier living environments for animals. Healthier animals have less disease and sickness reducing the need for antibiotics and other drug treatments.

5.2.9 Production Cycles

One of the most important elements to a successful livestock operation is the timing of the investment in the business. Any resource industry is subject to the market cycles. Cycles involve up periods where margins and profits are healthy and down times where profits may be difficult to achieve. The livestock industry is no different. At the present time, the market is in an up cycle and perhaps is peaking. This makes potential investment in the industry either for new operators or expanding existing operations more risky. The opportunity to buy high and sell low is very realistic. Risk is high.

5.3 SOCIAL

5.3.1 Density of Population and Farm Demographics

One of the strengths of northern Alberta, insofar as intensive livestock operations are concerned, is the scarcity of population. While this is normally a problem when it comes to the delivery of services to the residents of the north, for manure disposal it can be an asset.

As indicated earlier in this report, the average density of population in northern Alberta, the NADC area is .66 person per square kilometre, well below the provincial average of 4.2 person per square kilometre. Generally, the development of the livestock industry should not create a problem except in some cases where country residential development is more prevalent.

Succession planning is becoming more important amongst the farming community. Developing opportunities for the next generation of farmers is an issue facing agriculture.

5.3.2 Labour Supply

In agriculture generally, labour supply is an issue. For intensive livestock operation, the level of expertise increases over traditional family farms. However, even with intensive operations, there is a demand for relatively unskilled labour. It is becoming increasingly more difficult to find sources of unskilled labour to fill the needs.

The intensive livestock industry is a complex industry. It will require a high degree of expertise to manage the operations. Northern Alberta has several post secondary education institutions that are in a strong position to assist in the development of a well-trained labour force.

5.3.3 Education and Personnel

As the business of intensive livestock industries becomes more complex, the education levels of the managers must likewise increase. Education falls into two categories, the education of the operator and the availability of an adequate labour supply.

With respect to the former issue, opportunities for training are available at many of the post secondary institutions in Alberta. Olds College is frequently mentioned as an excellent training facility for agricultural entrepreneurs. Fairview College in Fairview Alberta also runs several agricultural technology programs including one in beef production.

On the other hand, the availability of an adequate labour supply to assist in the operation and management of an ILO is difficult in northern Alberta. The main reason is abundance of other well-paying opportunities in such jobs as the oil patch or forestry sectors of the economy. These industries drain the labour supply.

5.3.4 Other Factors

The experience of the operator is a factor that can be critical to the success of an operation. In southern Alberta, farming practices have been established for at least 4 generations of farmers. In northeastern Alberta, farming is well into its third generation while in the Peace country, much of the farming is 1st and 2nd generation farming.

This situation is probably one of the biggest limiting factors to the development of the livestock industry in northern Alberta. The length of time in business is huge and provides the south with a major competitive advantage at this time. Some of the factors affected by experience include willing to take risk, well developed infrastructure, a significant knowledge base of the industry including a strong recognition of the cycles of the livestock industry and how to weather the cycles, a well established network and access to huge amounts of equity.

One of the biggest advantages the south has over the north is the willingness to take a risk. With all the advantages that have been outlined in this report, the question emerges, what's holding us back?

The simple answer is the reluctance of individuals to take a risk in an industry that they may not be familiar with. Combine this with the existing problems in the grain industry, there is little incentive to risk even more. Many farmers rather than taking further risk chose to pursue off farm employment as way to manage finances rather than looking at a more integrated approach.

One of the important issues affecting the development of intensive livestock operations in Northern Alberta is the attitude. It is apparent in the many surveys that have been

completed, and in the results of approval processes, that there is a bias in the rural area towards cattle and against hogs. This bias has influenced local decision-making against hog expansion.

Access to well developed infrastructure includes ready access to all weather roads, irrigation and packing plants. As the industry has been around longer in southern Alberta much of the infrastructure is much better developed. In northern Alberta, paved roads continue to increase slowly. It doubtful that one will see an irrigation program for northern Alberta. The packing plants which have been created are world class facilities and not likely to be duplicated elsewhere in the province. The trend is to consolidation, bigger, more efficient plants.

Experience begets knowledge. An extra 20 to 40 years of farming is large time advantage that is difficult to overcome. However, knowledge is transferable at a faster rate than ever before and the gap can narrow.

With the length in time comes a strong well-developed network. This network is very evident in the lobby strength that the south has over the north. It is evident in other ways as well. Years of experience and network can lead to the development of a trust relationship between individuals. This trust relationship can be the source of significant amounts of capital. The capital has been developed through years of successful farming operations and passed down through the generations. For those persons who retired from farming with significant assets, they may feel much more comfortable reinvesting in livestock operations than in other forms of investments. These individuals with access to money have provided significant capital to the development of an intensive livestock industry in the south.

Comparably, there has not been sufficient time to build up the equity base in the north. Indeed the cheap land may work against the north at times in terms of an equity buildup. Moreover, it is impossible to develop the strong trust network except with the passage of time.

Increasingly, as well, is the strong business approach to the industry. In a global market place, the average farmer must compete with large corporations, technology, and vast amounts of expertise and education. The larger operations have specialists who monitor every element of the operation, from feed supply to future contracting. These experts monitor trends as they emerge, perhaps on an hourly basis.

As with other businesses, there appears to be an increasing trend to specialization in the industry.

5.4 GOVERNMENTAL

5.4.1 Regulation Barriers

One of the most critical components to the success of future intensive livestock operations in all of Alberta is the appropriate management of the regulation process. This is a complex and difficult area to examine in that it has many aspects. It involves the development of rules and regulations to govern the industry itself and protect the environment, the financial investment in the industry, neighbouring land uses, and food safety.

As the livestock industry grows and operations become larger, the need for regulations also grows. The regulation process includes the land use planning process and the regulation of the livestock operations. It involves both mandatory requirements and voluntary guidelines. Currently the majority of the approval process lies at the municipal level with some input from the province. The process varies from municipality to municipality, which is in and of itself creates a climate of uncertainty. It is clear, however, that the authority to approve or refuse intensive livestock operations lies with municipal governments.

In order to try to bring some order to the approval process, the Minister of Agriculture, Food and Rural Development has struck a committee chaired by Albert Klapstein, MLA, Leduc to make recommendations about a framework that will ensure sustainable livestock development. The committee is to examine the issues surrounding intensive livestock including provincial and municipal roles, approval processes and on going monitoring and enforcement. The following is an overview of the different regulations that affect the approval process for intensive livestock operations.

5.4.2 Land Use Planning Processes

5.4.2.1 Provincial Land Use Policies

As per the Municipal Government Act, the Provincial Land Use Policies for the Province of Alberta are to provide direction to municipalities in the preparation of statutory plans and bylaws. Compliance is voluntary as the Province merely encourages municipalities to comply with the policies, as there is no mechanism to enforce compliance.

Insofar as the policies themselves, the Province makes the following statements regarding intensive livestock operations:

5.4.3 Resource Conservation

5.4.3.1 Agriculture

Municipalities are encouraged to identify, in consultation with Alberta Agriculture, Food and Rural Development, areas where agriculture activities including extensive and intensive agriculture and associated activities should be a primary land use.

Municipalities are encouraged to minimize conflicts between intensive agricultural operations and incompatible land uses through the use of reciprocal setback distances and other mitigative measures.

5.4.4 Municipal Plans and Bylaws

5.4.4.1 Municipal Development Plans

All municipalities greater than 3500 persons must prepare a municipal development plan. A municipal development plan is a statutory plan according to the Municipal Government Act. As identified in the section above, all statutory plans must be consistent with the provincial land use policies. It follows then, that all rural municipalities greater than 3500 persons must have a municipal development plan and the municipal development should address the issue of intensive livestock operations.

In the NADC area, of the 20 rural municipalities in existence, 9 of the 20 have municipal development plans.

5.4.4.2 Land Use Bylaws

There are 20 rural municipalities within the area covered by the NADC. Each of the municipalities has a land use bylaw as required by the Municipal Government Act. The purpose of the land use bylaw is to regulate land uses within the municipality. A land use bylaw does this by dividing the municipality into districts and prescribing uses that are allowed within the district. The bylaw also establishes the rules and regulations for each use.

All of the land use bylaws in northern Alberta reference the Code of Practice as a mechanism for dealing with intensive livestock operations. The Code of Practice has been adopted in part to deal with several issues such as the definition of intensive livestock operations, manure handling and disposal standards and minimum distance separations between intensive livestock uses and other land uses. Most municipalities are considering implementing the provisions of the 2000 Code of Practice.

5.4.4.3 Overview of the Approval Process

The approval of intensive livestock operations currently involves seeking permission from the local municipal government. In municipalities this involves either a land use bylaw amendment or development permit, or both.

Generally, in rural areas, intensive livestock operations are listed as a discretionary use in the rural or agricultural district. Most of the bylaws for rural municipalities in northern Alberta reference the requirement to conform with the former Code of Practice for the Safe and Economical Handling of Animal Manures for the siting of new or expansions to existing ILO's.

In the approval process where the approvals require a land use bylaw amendment, an applicant for an intensive livestock use would make an application to amend the local land use bylaw. The failure to secure the appropriate zoning would preclude the use from occurring. All land use bylaw amendments require a public hearing.

In this instance, a municipal council following a public hearing may give the bylaw the required readings to make a change to a land use bylaw. The public hearing process provides an opportunity for public involvement in the decision making process. However, the decision of the local Council is final unless appealed to the courts on a matter of law.

Where intensive livestock operations are listed as a permitted or discretionary use only a development permit is required. Either the Development Officer or the Municipal Planning Commission depending on the bylaw in effect can issue the permits. A decision on a development permit is appealable to the Subdivision and Development Appeal Board of the municipality. The Municipal Planning Commission approval process can be a public process.

In evaluating a proposal for an intensive livestock operation, the municipality will normally seek input from the Department of Agriculture, Food and Rural Development through an agricultural engineer. The Department will make comments, if requested, on the compatibility of a proposal to the Code of Practice. The role the Department plays is advisory only, and a municipality is free to accept or reject the advice.

All municipalities are required to have a Subdivision and Development Appeal Board in order to hear appeals on subdivisions and development permit decisions. The composition of the Board is governed by the Municipal Government Act, which states that the majority of members of the Board must not be councillors from the municipality. The membership of the Board is drawn from the public at large and, as such, is representatives of the community.

Many of the processes identified involve public hearings or meetings, and, as such, are subject to political scrutiny. This does create a barrier to the development of the intensive livestock industry in that a single applicant for an ILO may be facing a room full of angry residents (voters). As all of the decision-makers, either Council or SDAB members are local, the pressure to refuse the applications can be intense. All of this notwithstanding the fact that the application may meet or exceed all the technical requirements of the Code of Practice and have the blessing of AAFRD or other government department.

It involves extensive negotiations with the Department of Agriculture, Food and Rural Development.

5.4.5 Code of Practice for Responsible Livestock Development and Manure Management

The 2000 Code of Practice for Responsible Livestock Development and Manure Management has replaced the 1995 Code of Practice for the Safe and Economic Handling of Animal Manures. The Code is intended to provide guidelines for livestock operators, municipal officials, land use planners, and others concerned with the siting of new or expanding intensive livestock operations. It is intended to provide guidelines to municipal officials to assist in the evaluation of ILO's.

Most, if not all, municipalities appear to accept the principal of the Code of Practice. Indeed, most have reference to the Code in their land use bylaws. However, the municipalities have two major drawbacks to the implementation of the Code of Practice. The first is the technical expertise to evaluate ILO proposals utilizing the Code requirements. This is overcome in part by the assistance of local engineers from the Department of Agriculture, Food and Rural Development.

It should be noted that the Code of Practice establishes minimum distance separations from non-intensive agricultural uses. This is useful in locating ILO's, but does not assist in protecting the ILO's from encroachment by other uses. It should be noted that municipalities have the power to enforce setback requirements from ILO's but are reluctant to do so.

The second, and perhaps more important issue is the on-going monitoring and enforcement of the operations. Again, municipalities have very limited capacity at this time to monitor and enforce environmental or health standards of ILO's.

5.4.6 Factors Influencing Local Decision Making

Municipal decision-makers are reluctant to say no to the subdivision of land for residential purposes unless specifically required to do so by the province. Further municipalities are reluctant to enforce rules that they perceive as a provincial responsibility.

This attitude reflects the political reality of municipal government. If the local ratepayers want something, it's up to the municipal politician to deliver on the wishes of the residents. In the context of ILO's, if the residents don't want something in their backyard, the Council, in the vast majority of situations, will side with the residents over the technical merits of the application.

Secondly, there are two noticeable attitudes with municipalities regarding intensive livestock operations. The first is the fear or large corporate or multi-family farms "invading" the community, and taking away from the sense of community. The development of an intensive livestock operation by a "local" individual is perceived as "OK" but the development of a similar sized operation by a corporation or with foreign money would raise major objections.

A second noticeable attitude exists with respect to species. There is a strong bias against the hog industry. Comments were received regarding the popularity of similar sized hog and cattle operations in the same location. The cattle operation would have a much strong probability of being approved before the hog operation.

Another, and perhaps equally important, consideration is the ability of the municipalities to monitor and enforce the operations upon approval. Rural municipalities are likely to have an agricultural fieldman and development officer. However, neither is in a position to have the technical expertise to monitor and enforce the management of intensive livestock operations, particularly manure management.

There is some concern over a total provincial control of intensive livestock operations. There is some support for municipal control in that the local officials are seen to have a better handle on the local problems and issues than an unaccountable bureaucracy does in Edmonton. However it is the local decision making that has generally moved to limit intensive livestock operations.

5.4.7 Other Planning Issues

There are other issues that come into play as well in the approval process for intensive livestock operations. The development of major ILO's can put a stress on some of the municipal infrastructures, such as roads. ILO's can generate a significant amount of traffic, and more specifically, heavy truck traffic. The traffic can have an adverse impact

on local roads. Since the ILO's are taxed as farms, the revenue generation from the operations may not offset the costs of additional maintenance and other nuisance factors.

Previous planning legislation essentially enshrined a "right to subdivide one parcel out of every quarter section of land." The present legislation has delegated decision-making responsibilities to the municipality and this philosophy has not changed. It has empowered the municipalities to make decisions and choices regarding future land uses.

To this end, most municipalities still adopt the practice of the right of 1st parcel out. This has the effect of creating at least one country residential subdivision on every quarter section of land. In the context of siting intensive livestock operations, it makes it difficult for existing or future operators to find areas that would afford protection to ILO's from the encroachment of non-agricultural uses, hence potential conflicts. In addition, the current Code of Practice restricts ILO's from locating near residential areas, but has been specifically changed so as not to limit the encroachment of residential uses on ILO's.

GENERAL OBSERVATIONS

The province has a goal of promoting more livestock production, and this goal is best achieved through the intensification of livestock production. This direction is reflected in the Provincial Land Use policies. However, the provincial goal can be in direct conflict with municipal concerns. Since the approval process currently resides with local governments, the situation exists where municipal objectives may thwart the provincial goals.

In the focus groups, the need for a stronger provincial role in the approval process was very strong. There was a very clear message for the province to take over the approval process from the municipalities. The position emerged for two principal reasons. Firstly was the need for better protection of existing uses. Municipalities appear to be unable to say no to development. Consequently non-agricultural uses are allowed to encroach upon intensive livestock operations. The result is that the intensive livestock operation is limited in its future ability to expand, as any expansion would not meet the minimum distance formulas. This has a tremendous impact on the financial viability of the operation and the financial investment that has been made. Investors want to be assured that their investment will be protected that there will be no rule changes.

Secondly, any serious intensive livestock operator, in seeking a permission to build or expand an operation must produce a series of studies and engineering reports to support the proposal. These studies can be expensive to produce. It appears that notwithstanding that a proposal for intensive livestock may meet all of the technical requirements of the Code of Practice, the proposal may be refused for other non-technical reasons. The uncertainty relative to the approval process does not encourage development in the intensive livestock business. Indeed, the potential to waste money on studies scares investors.

6.0 STRATEGIES IDENTIFIED BY FOCUS GROUPS

6.1 INFRASTRUCTURE/SERVICES

Processing Facilities

- Need for a federally-inspected/approved meat plant(s) to handle meat products from the North;
- Would assist in the development of niche markets.

Roads

- New ILO's should be on paved roads.

Power

- 3-phase power is necessary—utility companies should pay for capital costs and recapture costs through rates.

Gas

- The availability of natural gas is not generally perceived to be a problem.

Water

- Want a level playing field with infrastructure programs similar to those in south;
- The development of water licensing requirements may limit expansion possibilities;
- Irrigation districts, if required;
- Availability can be an issue in some areas.

Feed

- The more livestock, more demand for feed;
- More demand, more competition;
- If no demand, may lose existing feed suppliers;
- Increasing the supply of pasture will increase feed supply.

6.2 ENVIRONMENTAL

- Clear, consistent set of rules need to be established for the processing of development applications for intensive livestock operations;
- Less municipal involvement, more provincial responsibility;
- More self enforcement from industry;
- Need for strong right to farm legislation;
- Development of acreage's in rural areas impact expansion possibilities, encroachment is becoming an issue;
- Compliance to the Code of Practice is extremely important;
- Discussion should be about nutrients, not manure;
- Impermeable soil good for lagoons and other manure storage structures;
- Climate not a limiting factor.

6.3 AGRI-FOOD SAFETY

- Perception is important, the potential to limit production is high if the right perception is not developed, i.e. big is bad, small is good;
- Becoming a high priority;
- Size is important as it leads to more efficient and healthier operations.

6.4 BUSINESS/FINANCIAL

6.4.1 Banking

- Banks have a requirement for solid business plans;
- Operators don't feel that banks don't understand the cycles;
- Better business planning, particularly for start-up operations;
- Need to build up equity to weather cycles;
- Need for the development of relationships/partnerships with other ILO's.

6.4.2 Investor Confidence

- Banks are not the only source of equity;
- Many new ILO's in the south are being built by money pools;
- Need for money for capital improvements;
- Need to build on strengths of the region, including competitive advantages, such as lower land costs;
- No protection for investor from bad land use planning decisions at municipal level.

6.4.3 Operational

- Economics of scale are important and need to be understood;
- As margins shrink, operations must get bigger to obtain the expected rates of return;
- Risk takers need to be rewarded;
- Government needs to share the projections for livestock growth with the banks;
- Strong need for provincial regulations on ILO's to protect the financial investment made by an ILO operator against uses that may limit or impact the operation's potential;
- Need to develop partnerships to gain experience;
- Need to develop consistent and reliable product;
- Need to work with end users to understand needs;
- Opportunities for specialization;
- Corporate versus private investment an issue;
- Need to be aware of costs and returns, not all packers pay the same;
- Costs of production have to be analyzed carefully;
- Professional help available but not being used;
- Disbelief in numbers.

6.4.4 Marketing

- Need to be better marketers of our strengths, to gain investor confidence in the opportunities in the north;
- There is a strong opportunity to expand livestock operations in the North;
- More opportunity to expand operation if there was more capacity in the meat plants in the North (keep it local).

6.4.5 Niche Markets

- Look towards developing niche markets, focusing on wild game, organically grown red meat, particularly for foreign/European markets.

6.4.6 Supply Management

- Need to rethink supply management in northern Alberta. Does not appear to be any benefits;
- Need a system that is fair;
- System must be sustainable.

6.4.7 Government

- Provincial government needs to take responsibility for approval process;
- Too many conflicting land use regulations at local level for approval process to work effectively;
- Needs to be a uniform approach to the approvals.

6.4.8 Social/Education

- The opportunities for intensive livestock;
- Opportunities for specialization;
- Off-farm income inhibits the development of the livestock industry;
- Better opportunities for farmers to understand livestock to improve investor confidence;
- Need for a trained labour force;
- Need to educate urban residents on the economics of food production, food safety, and economic impact of agriculture;
- There is a bias towards family farms and against large corporate farms;
- Develop a better system to ensure generational transfer.

7.0 CONCLUSIONS

The intensive livestock industry is a growing business in Alberta. The one of the purposes of this report is to examine the current state of the livestock industry in northern Alberta and in particular the intensive livestock business. Some general observations are in order regarding the livestock industry in northern Alberta.

- Overall, the livestock industry in northern Alberta has maintained it's share of the Alberta market at approximately 10% of the total number of animals;
- There is a small but significant intensive livestock industry in northern Alberta;
- The predominate livestock in terms of numbers in northern Alberta is cattle;
- The number of cattle in northern Alberta has more than doubled in the past 25 years;
- The number of cattle in northern Alberta as a percentage of the overall Alberta herd has increased from 8% to 11.6% in the past 25 years;
- Hog production in terms of absolute numbers and as a percentage of the Alberta total has declined since 1971 although more recently there has been an increase in production;
- Bison numbers are also increasing, and are nearly ½ of the provincial totals;
- Other specialty livestock are growing and are important but not significant;
- The growth in chickens and dairy is constrained by the supply management system, particularly the chicken industry;
- There has been growth in those parts of livestock industry that are not governed by government regulated boards.

Northern Alberta has numerous opportunities for growth and few barriers to thwart an expanding livestock industry. In examining the barriers for intensive livestock, some of the more traditional concerns or reasons against the expansion of the industry are not in fact true barriers. Indeed, there has been expansion in the intensive livestock industry in northern Alberta. However, the expansion has been smaller and more quietly than the large expansions that have generated significant media coverage in the south. Some of the major attributes of the north include:

- Lots of inexpensive land;
- A population density that is well below provincial averages;
- Excess forage production;
- Good access and availability of important infrastructure such as power, gas and paved roads;
- An abundance of water but much of the water is contained within river systems which will require assistance to access;
- Climate should not be considered a major barrier as many of the climatic conditions in northern Alberta are similar to central Alberta;

- A growing level of experience and expertise amongst producers.

Some barriers to the development of an intensive livestock industry in northern Alberta do exist. The barriers may differ between livestock groups but some have common issues. Based on the discussions with producer groups, the following barriers were identified regarding the future development of intensive livestock operations in northern Alberta can be made:

- There is a need for clear and consistent regulations for ILO's;
- The government needs to level the playing field in the development of regulations to ensure there is a standard set of rules from municipality to municipality;
- There needs to be certainty and confidence in the approval system to protect existing investment;
- The province must assume a greater role and responsibility in land use planning if intensive livestock operations are to be successful. The delegation of decision-making responsibility to municipalities is not working;
- The lack of risk taking is a major barrier to the expansion of intensive livestock production in the north;
- The opportunities for off farm income in the north tend to be counter productive to investing in the livestock industry particularly in the Peace region;
- The current levels of cash flow among grain farmers does not allow the farming community to reinvest into livestock, even if they wanted to;
- Southern Alberta has been farming longer than northern Alberta. This has created wealth in the south, which in turn is now financing much of the increase in livestock production;
- There is a "cultural" barrier against larger foreign owned intensive livestock operations in favour of smaller family (community) run operations.

With respect to the poultry industry, a significant concern was raised regarding the supply-managed system. With the supply-managed industry, the industry is regulated through a Board consisting of producers. Since the inception of the system, there has been considerable consolidation in the industry. The result has been that the representation on the Board is overwhelmingly in favour of the bigger producers in that voting based on the amount of quota. The difficulty for smaller producers is that the larger producers create the rules and assign changes in quota. All the changes while voted on in democratic manner fail to recognize the smaller producers. Hence, while the market for fresh chicken grows in northern Alberta, local producers are unable to expand production to meet the growth due to restrictions placed on the producers by the Board that is dominated by larger producers.

Whereas the province establishes the Board, the local producers are requesting that the Board be restructured to create a more level playing field for all concerned and to protect the rights and investment of the smaller producers.

There is clearly a great deal of opportunity to expand the livestock industry in northern Alberta. However successful growth in the industry must be sustainable. Where growth has occurred, it has been a result of careful investment, a willingness to take a risk and perhaps good timing. With the growth has come experience in terms of how to operate a successful business, to weather the up and down cycles of the industry. This growth has come through hard work and dedication and without artificial government programs. If the success is to be repeated, the blueprint must be followed.

Some of the other key factors in supporting a successful intensive livestock industry in northern Alberta might include some or all of the following factors:

- There is limited potential to expansion processing facilities in the north except to provide specialty processing i.e. bison, exotic livestock or "northern Alberta natural products;
- Niche markets will provide opportunities to some producers but the major economic impact of intensive livestock production will be in the expansion of the cattle and hog sectors;
- The expectation for the industry is to create a consistent supply of livestock for the market both quality and quantity;
- Growth will occur in the north but slowly due to lack of experience and wealth;
- Growth based on the expansion of existing producers will be more sustainable in the long run than artificial incentive programs to boost intensive operations;
- Strategies are needed that will enable existing producers to grow;
- Farmers need to retain the ownership of cattle to increase wealth;
- Growth in the livestock industry in the south has come for a variety of reasons including experience;
- Access to adequate water supplies is important and while significant resources exist, licensing and environmental regulations make it difficult to access the sources;

8.0 RECOMMENDATIONS

The livestock industry is alive and well in northern Alberta. There is significant room for growth in the industry provided the conditions are right. In order to enhance livestock production in northern Alberta, the following recommendations are made.

Recommendation #1 Promotion and Education

The successful development of intensive livestock operations in northern Alberta will require that individuals and corporations involved in the business develop a better understanding of the business. It is a complex business subject to market cycles that can bring highs and lows, which results in risk. Clearly there are opportunities to expand intensive livestock operations in northern Alberta. However, the government role in promoting intensive livestock must be deliberate, as there is public skeptism over government promoted projects. Successful long-term growth should be based on the principle of sustainability. Therefore the role of government must be one of facilitation and not intervention.

Southern Alberta has been able to capitalize on the intensive livestock market in part because of their extensive experience with livestock. This experience is critical in establishing operations. Experience provides much strength and includes knowledge, build-up of equity within existing operations, access to capital from non-traditional sources and a familiarity with operations and operators. This is difficult to reproduce in the north at this time at the same scale as the south. It will evolve over time.

It may be possible to assist in the facilitation of the transfer of knowledge from one region to another. To this end, northern producers should attempt to develop networks or working arrangements with other southern producers and processing facilities. The development of these networks will be important to the development of intensive agriculture in the north.

It is recommended that the NADC develop a list of livestock producers in northern Alberta and that the list be updated on a regular basis as the basis for developing workshops and other educational forums for expanding production.

It is recommended that the NADC in conjunction with Alberta Agriculture, Food and Rural Development develop a forum on the expansion possibilities of intensive livestock operations. The forum should endeavor bring together all those involved in the livestock industry to develop specific strategies for growing the intensive livestock industry in northern Alberta. The forum should be held on a bi-annual basis.

The forum should specifically target producers, processors, financial institutions, financial planners, accountants and other professionals who may be involved in the livestock industry. One of the primary purposes of the forum should be to develop alliances between producers and processors and financial institutions. It is recommended that the NADC bring producers and processors from southern Alberta to northern Alberta to meet with northern producers to exchange ideas and develop alliances and contacts.

It is recommended that the NADC encourage the participation of northern producers in trade shows and other public events in southern Alberta as a mechanism for espousing the opportunities in northern Alberta.

In addition to potential operators, the public also needs to be educated on the merits of intensive livestock operations. There is much to be gained in terms of the development of a safe and reliable food supply. The intensification of the livestock industry can ensure a safe and reliable food supply for generations.

It is recommended that the NADC in conjunction with Alberta Agriculture, Food and Rural Development and municipal governments sponsor intensive livestock awareness programs for the purposes of educating the general public on the food safety and supply issues.

Recommendation #2 Land Use Regulations

The regulation of intensive livestock operations including land use approvals must lie with the provincial government and not municipalities. Municipalities have difficulty in approving these operations as the decisions are often based on politics not the technical merits of the applications. Further, land use rules change from municipality to municipality resulting in an uneven playing field. In addition most municipal planning policies and regulations discourage the development of intensive livestock operations by enabling the encroachment of incompatible uses near intensive livestock operations.

It is recommended that the NADC to support the development of a provincial approval system for intensive livestock operations based on the technical merits of the application and to remove municipal decision making from the approval process.

It is recommended that the NADC support changes to the Municipal Government Act and the subdivision and development regulations that provide protection to existing or future intensive livestock operations from the encroachment of non-compatible land use activities.

It is recommended that the NADC ask the government to strengthen the requirement for municipalities to conform to the Provincial Land Use Policies.

Recommendation #3 Infrastructure

The development of intensive livestock operations requires access to various forms of infrastructure including power, gas, paved roads and water supply. The entire infrastructure is available to a greater or lesser extent throughout the north. There is a concern that some infrastructure programs are available in the south and not in the north. Producers would like a level playing field.

It is recommended that the NADC continue to monitor infrastructure programs to ensure that all programs are delivered on a province wide basis and taking into account the unique circumstances of Northern Alberta.

It is recommended that NADC continue to push for improved infrastructure for northern residents.

One of the most important issues affecting intensive livestock operations is the adequate supply of water. The river basins of northern Alberta contain huge amounts of water. For example, the Peace River at the British Columbia border contains nearly 40 times the amount of water flowing in the Oldman River system. What is lacking is an integrated system of water supply that would be equivalent to the dams and irrigation systems found in southern Alberta.

One approach that may be worth pursuing is the development of agricultural industrial parks that specialize in intensive livestock operations. The concept would build upon the theory of traditional industrial parks where uses of a similar nature reside and take advantage of various amenities.

Such a concept may have several advantages. As with any more traditional industrial park, the area would clearly identified an agricultural industrial park for intensive livestock uses. The area would be large enough to accommodate the uses. The land would have zoning that would encourage intensive livestock development. It could be marketed in the same manner as a more traditional industrial area.

More importantly, resources, particularly infrastructure could be concentrated in a single area. Infrastructure important to the development of the industry such as power, paved roads and a quality water supply could be provided to a central area rather than dealing with infrastructure on a scattered basis. Manure disposal could be handled on a much larger scale employing other technology that might not be available to smaller single operations. Additional resources such as feed mills, veterinarian services and agricultural supply outlets could be concentrated as well.

Lastly, municipalities developing intensive livestock operations could examine other incentive to attract the industry to a specific location. At the time of the writing of this

report, the concept of the developing intensive livestock utilizing an agricultural park approach is unknown. It is suggested as a mechanism for addressing the many issues facing the industry and with view towards encouraging the development of the intensive livestock industry.

It is recommended that the NADC support applications to develop regional water supply systems in northern Alberta particularly where the water systems may benefit livestock producers.

It is recommended the NADC examine the concept of agricultural industrial parks as a means of encouraging the growth of the intensive livestock industry.

Recommendation #4 Supply Managed Livestock

It is worth noting that where growth in the livestock industry has occurred in Northern Alberta, it has occurred in the non-regulated sectors. Conversely, where there is supply side management of an industry; there has been a decline in the production of livestock in that sector. More specifically, with respect to the supply-managed industry particularly the chicken industry, a supply-managed system is favored provided changes to the structure of the organization are made. If the changes can not be made, then the producers in Northern Alberta would prefer to opt out of supply management in favour of a free market system. If the system is not modified there is a real danger that established poultry production that currently exists in Northern Alberta will be lost resulting in the loss of jobs and local markets for feed.

It is recommended the NADC make representation to the government to modify the legislation governing the Alberta Chicken Board to ensure that small producers have a meaningful voice in the establishment and assignment of quotas.

It is recommended that the NADC request the government to allow chicken producers in northern Alberta to opt out of the Chicken Producers Board to establish their own quotas if changes to the current system can not be made.

Recommendation #5 Processing Facilities

Currently in Alberta there are some major world class packing facilities. These facilities have the capacity to expand and are in a position to handle most of the future livestock production expansion. There is a trend to consolidation of packing facilities into large facilities that can handle production from not only Alberta but across western Canada. This trend eliminates the probability for any additional major processing facilities in northern Alberta. However, there may be opportunity to develop smaller federally

inspected facilities to meet the demands of niche markets. Niche markets would include processing of bison, elk and deer and perhaps beef and pork to a limited extent.

It is recommended that the NADC work with existing processors in northern Alberta to develop niche market processing where required.

Recommendation #6 Access to Capital

The intensive livestock industry has real potential in the north. One of the questions which arises must be how does one get the capital to invest in intensive livestock. How does one minimize the risk involved with the investment, to give some comfort to the investor that the money invested will not be lost? Within the agricultural industry, there are existing loan programs that enable investment into farming while minimizing risk to the lender. The program at the federal level is the Farm Improvement Program and has a ceiling of $250,000. The provincial program is the Farm Development Loan and has a cap of $100,000. The respective governments back both programs.

The reality is that intensive livestock operations will take significantly more capital than the programs currently allow. One way of encouraging more investment is to raise the upper limits of these programs for livestock operations.

It is recommended that the NADC support the expansion to existing loan programs to better meet the needs of the livestock industry. In addition, the development of a community bonds system to encourage the investment of local dollars into intensive livestock industry in northern Alberta should be investigated. The development of a community bond system may have merit in providing non-traditional sources of capital to livestock operations.

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